

NEW ENGLAND NOTE

A NEW RECORD FOR *ALLIARIA PETIOLATA*  
(BRASSICACEAE)  
IN HILLSBOROUGH COUNTY, NEW HAMPSHIRE

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Garlic mustard [*Alliaria petiolata* (M. Bieb.) Cavara & Grande, Brassicaceae] is a European native, first recorded in North America in 1868, and in New England in the 1890s (Nuzzo 1993a). The species is a biennial in North America, though a “winter annual” in Europe, and is adapted to a wide range of conditions (Anderson et al. 1996; Cavers et al. 1979). In some areas of North America it is displacing native vegetation (Cavers et al. 1979; Nuzzo 1993b; White et al. 1993). This article establishes its presence in Hillsborough County and notes other reports of its presence in New Hampshire and adjacent counties in Massachusetts.

Current handbooks on the New England flora have not yet caught up with the spread of this species. Gleason and Cronquist (1991) describe it as being found “throughout our range,” though it has not been reported for New Hampshire in other regional floras (Magee and Ahles 1999; Seymour 1993). Herbarium specimens and other reports, however, establish it firmly in New Hampshire at least since 1989. It has been reported from Sullivan County at two Cornish sites (Anderson 1997; Angelo 1989) and in Plainfield at the Plainfield Sanctuary of the New England Wildflower Society (Mattrick 2000). It has also been collected in Westmoreland in Cheshire County (*Boufford, Brackley & Dutton 27,087 NEBC*) and in Durham in Strafford County (*DeWees 27 NHA*). *Alliaria* has been collected in all adjacent counties in Massachusetts (Hunt et al. 1995; Magee and Ahles 1999).

In beginning a floristic survey of the Hillsborough County area, I have encountered two stations of garlic mustard in the Wilton-Lyndeborough area in south-central New Hampshire. At the first station a flowering individual was noted on May 13, 2000 on a lawn in Lyndeborough, near the intersection of Old Temple and Pettingill Hill Roads. A photograph was taken as a voucher

(Drayton *s.n.* NHA 88,425). No seedlings (first year rosettes) or other flowering individuals were observed, suggesting that this station represents an initial colonization event of one or a few seeds in the years immediately preceding (Drayton 1999). A second flowering plant was noted in Wilton on May 15, 1999 along the Burton Highway, approximately 200 m west of its intersection with the Isaac Frye Highway. No seedlings were noted. This population was not vouchered.

*Alliaria petiolata* has no known dispersal vector (Cavers et al. 1979). Passive dispersal is a common characteristic of herbs in deciduous forests and forest margins where this species is largely found (Drayton 1999; Hughes and Fahey 1988). The seeds fall to the ground upon the dehiscence of the siliques, and most of the seeds fall no further away than the height of the mother plant. Studies of the distribution of *Alliaria* suggest that some secondary dispersal occurs by tracking of fallen seeds by human and animal feet and vehicle tires, and occasionally by surface water run-off and similar agents.

New colonies of *Alliaria petiolata* can be quite inconspicuous, especially in the edge habitat along roads and similar corridors where the species is spreading. Thus, substantial populations can be established, creating "nascent foci" (Moody and Mack 1988) that are very difficult to exterminate. The reports from southern New Hampshire suggest that this process is well under way. Early detection and eradication is the best way to prevent explosive growth (Drayton and Primack 1999; Nuzzo 1996).

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